

ARMY PROGRAMS

Joint Tactical Radio System (JTRS)

The Joint Tactical Radio System (JTRS) is a family of high-capacity, programmable, multi-band/multi-mode tactical radios that provides both line-of-sight and beyond-line-of-sight communication capabilities to the warfighter. The JTRS program will eventually replace DoD's current inventory of some 750,000 hardwired tactical radios of various, independently developed families and versions with some 250,000 modular, programmable JTRS radios. JTRS uses software defined radio technology to achieve flexibility, interoperability, and ease of upgrade. The Joint Requirements Council validated the updated JTRS Operational Requirements Document Version 3.2 in March 2003.

The Software Communications Architecture (SCA), a nonproprietary open systems architecture, is an essential component of the JTRS strategy and is the basis for software waveforms. The JTRS Joint Program Office maintains the SCA and software waveforms, while the Services develop the Joint Tactical Radio (JTR) sets in Service-led acquisition efforts (called clusters). The Army-led Cluster 1 is developing JTR sets for Army and Marine Corps ground vehicular, Air Force Tactical Air Control Party ground vehicular, and Army rotary wing applications. The Special Operations Command-led Cluster 2 is upgrading an existing handheld radio, the Multiband Inter/Intra Team Radio, to SCA compliance. The Navy-led Cluster 3 is developing JTR sets for maritime and fixed-station applications. The Air Force-led Cluster 4 program will develop airborne JTR sets. The Army-led Cluster 5 program is developing handheld, manpack, and small form-fit sets suitable for embedding in the Army's Future Combat Systems and other platforms requiring a small radio. A cluster for space applications is also being considered.

The JTRS SCA originally applied to waveforms operating at frequencies from 2 megahertz to 2 gigahertz. In June 2003, the ASD(NII) expanded the scope of the JTRS SCA to all waveforms operating at frequencies above 2 gigahertz.

TEST & EVALUATION ACTIVITY

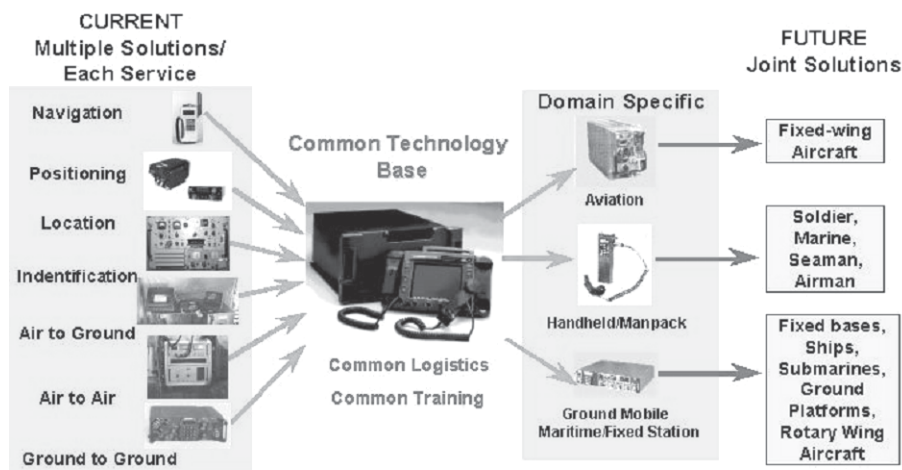
Cluster 1 completed several designs in a series of design reviews and continued planning for the early operational assessment scheduled for December 2004 using pre-engineering development model radios. Government developmental testing, followed by a limited user test, is scheduled in FY05/FY06 using engineering development model radios.

Cluster 3 initiated activities for a Milestone B review in 2QFY04. The Test and Evaluation Integrated Product Team met in September 2003 to develop the test strategy and begin work on the Test and Evaluation Master Plan.

Cluster 4 initiated pre-Milestone B activities and coordinated the Single Acquisition Management Plan. Cluster 4 is planning completion of Milestone B in 2QFY05.

Cluster 5 was established as an Acquisition Category 1C program in a May 2003 Acquisition Decision Memorandum. The Cluster 5 program has begun development of program documentation to support Milestone B in 2QFY04. The Test and Evaluation Integrated Product Team has met to develop the overall test strategy and Test and Evaluation Master Plan.

OSD approved the JTRS Joint Test and Evaluation Master Plan in October 2002.



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TEST & EVALUATION ASSESSMENT

The JTRS Cluster 1- Ground and Rotary Wing is aggressively executing the planned program and refining the design of the Cluster 1 radios. The Program Office delayed the early operational assessment by four months, to December 2004, to accommodate concerns over the maturity and anticipated functionality of the JTR sets. The functionality of the JTR sets for the early operational assessment continues to evolve. The program schedule, identified as high-risk at Milestone B, continues as high-risk.

The JTRS Cluster 3- Maritime/Fixed Station is planning Milestone B in 2QFY04. The program is coordinating required documentation through the various integrated product teams. The basic acquisition strategy states that contracts are awarded at Milestone B to two prime system contractors. The program will then select one of the prime system contractors to continue into system demonstration at the Critical Design Review in 2005. The system demonstration phase culminates with an operational assessment and Milestone C decision in 2007 for the program to enter low-rate initial production in order to support an operational test and full-rate production decision in 2008/2009. Risks are similar to those identified for the JTRS Cluster 1, particularly risks associated with the success-oriented schedule and budget.

The JTRS Cluster 4- Airborne initiated its pre-system development and demonstration phase for requirements definition, conceptual design efforts, and airborne network architecture definition. DOT&E provided comments on the Single Acquisition Management Plan and identified concerns with the schedule and proposal to possibly use engineering developmental models in the IOT&E. When started, the Test and Evaluation Integrated Product Team will further discuss these concerns when developing the test strategy and the Test and Evaluation Master Plan.

The JTRS Cluster 5- Handheld, Manpack, and Small Form-Fit sets initiated activity as a result of the May 2003 Acquisition Decision Memorandum. The Test and Evaluation Integrated Product Team met to develop a test strategy starting in July 2003. Concerns include the aggressive schedule, ability of initial products to fulfill all requirements of the Block I Operational Requirements Document, and the proposal to use engineering developmental models for the Block I operational test. The Test and Evaluation Integrated Product Team will address these concerns when developing the Test and Evaluation Master Plan.

An emerging concern across the JTRS Clusters is the proposal to use engineering developmental models in their IOT&E to alleviate aggressive development and fielding schedules. The various definitions and maturity standards for engineering developmental models could encompass production representative equipment. However, OSD policy is that the equipment used in operational testing be production-representative in functionality and essential physical characteristics to support accurate and valid assessments of operational effectiveness, operational suitability, and survivability. DOT&E will continue to apply this standard to any equipment entering IOT&E regardless of its designation.